



December 10, 2024

National Center for Science Education (NCSE) commitment statement in support of the National Academies of Sciences, Engineering, and Medicine Collaborative for Advancing Science Teaching and Learning in K-12 (CASTL-K12).

The *Framework for K-12 Science Education* (2012) from the Board on Science Education at the National Academies of Sciences, Engineering, and Medicine provided a new, research-based approach for improving science education in the United States. After more than a decade of dedicated work to create new standards based on the *Framework* and develop corresponding curriculum, assessment, and teacher preparation, there is still a great need for support to implement those standards in an equitable and consistent way.

NCSE's mission is to promote and defend accurate and effective science education, doing so via three main initiatives: (1) catalyzing action to defend the teaching of these topics, (2) investigating science education, particularly through high-quality and high-impact survey research on science educators' attitudes and practices, and (3) supporting science teachers and science teacher educators to teach science accurately, honestly, and thoroughly.

NCSE's mission and initiatives thus align with the *Framework for K-12 Science Education* in a research-based vision for science education in the United States. The *Framework* properly emphasized the centrality of evolution to the life sciences and brought a new emphasis on the importance of climate change. In fact, published research by NCSE shows that improvements in the treatment of climate change and evolution in state standards driven by the *Framework* have resulted in concrete improvements in the classroom presentation of these topics. Furthermore, in its work with science teachers and science teacher educators, NCSE has consistently emphasized the importance and effectiveness of distinctive features of the *Framework*, especially inquiry-based learning, in a way consistent with the approach of the *Framework*.



NCSE is well-prepared to support each of these goals in various ways. First, NCSE has long been active in coordinating efforts to adopt improved state science standards and to aid in their implementation, sometimes in the face of opposition, in individual districts and schools. Second, NCSE's Supporting Teachers program already coordinates a networked community of practice among science teachers across the country. Third, NCSE's Investigating Science Education program and Supporting Teachers program already work collaboratively to obtain and apply evidence relevant to improving science education, with regard to both content and pedagogy. Fourth, as a long-standing science education organization with a high public profile, NCSE is widely recognized as a reliable source of information and insight by the press and science communicators generally.

CASTL-K12 will pursue four primary goals:

- develop a coherent strategy for supporting implementation of science standards across states and districts,
- launch and coordinate a networked community of practice for stakeholders at all levels and across sectors,
- build on and share existing evidence-based policies, tools, and examples, and
- develop a coherent communication and engagement strategy for advancing K-12 science and engineering education broadly.

The National Center for Science Education hereby commits to supporting the goals of the National Academies of Science, Engineering, and Medicine's Action Collaborative on Advancing Science Teaching and Learning in K-12.

Sincerely,

A handwritten signature in black ink, reading "Dr. Amanda L. Townley". The signature is written in a cursive, flowing style.

Amanda L. Townley, Ph.D.
Executive Director